## 1. Overview

- **Objective**: Verify that Swag Labs' core shopping functionalities work correctly, including login, adding items to the cart, marking them as purchased (checkout), and removing items. UI consistency and boundary behaviors will also be evaluated.

- **Scope**: Includes:

  - Target Application: https://www.saucedemo.com/

  - Browsers: Microsoft Edge (Primary)

  - Testing Types: Functional, UI, Boundary Testing

---

## 2. Features to be Tested

**Functional Testing**:

- **Login Functionality:**

  - Valid login with correct credentials.

  - Invalid login attempts with wrong credentials.

  - Locked-out user scenarios.

- **Add to Cart Functionality:**

  - Adding single/multiple products to cart.

  - Cart icon updates accurately after adding items.

- **Remove from Cart Functionality:**

  - Removing products directly from product page.

  - Removing products from within the cart page.

- **Checkout Process:**

  - Navigating to cart page.

  - Clicking checkout button.

  - Ensuring checkout page opens properly.

**UI Testing**:

- Visibility and alignment of:

- o Login input fields and buttons.

- o Product titles, images, prices, and descriptions.

- o Cart icon and its item counter.

- o Checkout buttons.

- Button states (enabled/disabled) and hover behaviors.

- Error messages UI (e.g., incorrect login message display).

**Boundary Testing**:

- Login input fields:

- Maximum allowed characters in username/password fields (e.g., 100+ characters).

- Special character input handling.

- Cart capacity (if applicable):

- Adding large number of products to verify system handles it without failure.

- Checkout field validation (if covering checkout details entry later):

- Accepting or rejecting blank fields.

- Handling long text entries.

---

## 3. Features Not to Be Tested

- Backend data persistence or API-level testing (UI-based functional testing only).

---

## 4. Entry & Exit Criteria

**Entry**:

- The application ( https://www.saucedemo.com/ ) is accessible and stable.

- Functionalities are implemented.

- Edge WebDriver and test environment are properly configured.

- All required test cases are prepared and reviewed.

**Exit:**

- All planned test cases executed.

- No critical or high-severity bugs remain open.

- Regression tests passed.

- Test summary report shared with stakeholders.

- Automation scripts successfully executed without failures.

---

## 5. Test Strategy

- **Manual Testing** for Functional Testing, UI Testing, Boundary Testing, Exploratory Testing (as needed)

- **Regression Testing** after code changes.

- **Smoke Testing** before each round.

- **Automation Testing**:
  Selenium WebDriver (Python) used to automate:

    - **Login Process**

    - **Add Product to Cart**

    - **Delete Item (Remove from Cart):**

    - **Checkout Process**

---

## 6. Test Environment

| Component | Description |
|---|---|
| **Application URL** | https://www.saucedemo.com/ |
| **Browser** | **Microsoft Edge (v138)** |
| **Operating System** | **Windows 10** |
| **Automation Tool** | **Selenium WebDriver (Python)** |
| **WebDriver** | **Microsoft Edge WebDriver (msedgedriver.exe)** |

## 7. Roles & Responsibilities

| Role | Person |
|---|---|
| QA Engineer | Abdelrahman Ayman |
| Frontend Dev | Developer Team |
| Test Executor | QA Lead Assigned |

## 8. Risks & Mitigation

| Risk | Mitigation |
|---|---|
| Application structure changes (locators) | Use dynamic XPATH/CSS, update scripts quickly. |
| Website downtime during testing | Schedule tests during off-peak hours. |
| WebDriver version incompatibility | Use latest compatible Edge WebDriver. |
| Long text or special characters breaking UI | Log as UI bugs; handle boundary test cases. |

## 9. Deliverables

| Deliverable | Format | Location |
|---|---|---|
| Test Plan | PDF | /manual/ |
| Manual Test Cases | XLSX / PDF | /manual/ |
| Bug Report | PDF | /manual/ |
| Selenium Automation Scripts | .py files | /test |
| Demo Video of Automation | .mp4 | /demo/ |
| README Documentation | .md file | GitHub Repository |